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CHRISTIE, PARKER & HALE, LLP			EXAMINER	
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PASADENA, CA 91109-7068				
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/619,352

Applicant(s)

BUER, MARK L.

Examiner

Jason K. Gee

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 and 35-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-34 and 38-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 04/30/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is response to communication: response to election/restriction filed on 06/04/2007 with acknowledgement of benefit date of 12/05/2002.
2. Claims 1-44 are currently pending in this application. Group II, comprising claims 18, 19, 20-34, 38-41, and 42-44 have been elected.
3. The IDS received 04/30/2004 has been accepted.

Claim Objections

Claim 25 is objected to because of the following informalities: As per claim 25, the claim recites "wherein the sending step comprises send the at least one configuration packet." This should be changed to "wherein the sending step comprises sending the at least one configuration packet."

Appropriate correction is required.

Drawings

4. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings submitted are not formal. The submitted drawings are hand-drawn. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 18-20, 25-28, 38, 39, and 42 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Simon et al. US Patent Application Publication 2003/0093691 (hereinafter Simon).

As per claim 18, Simon teaches a method of providing redundancy in a security processing system comprising the steps of:

Establishing secure packet flow through a first security processor (paragraph 51, 59), modifying security association information associated with the secure packet flow (paragraphs 79 and 80; also paragraphs 57-59); sending the modified security association information to a second security processor (paragraph 60, 64, 66, 70, 74); and rerouting the secure packet flow to flow through the second security processor instead of the first security processor (paragraphs 70, abstract, and paragraph 95).

As per claim 19, Simon teaches wherein the rerouting step is in response to a failure of packet flow through the first security processor (abstract, paragraph 79, paragraph 95).

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As per claim 20, Simon teaches a method of mirroring security association information comprising the steps of: receiving, by a first security processor, at least one packet (paragraph 55), modifying security association information associated with the at least one packet (paragraphs 58-60 and 79-80), storing the modified security association information in a first data memory (paragraph 59, paragraph 70), sending the modified security association information to a second security processor (Paragraphs 60, 65, 66, 70, 74), and storing, by the second security processor, the modified security association information in a second data memory (60, 65, 66, 70, 74), and storing, by the second security processor, the modified security association information in a second data memory (paragraphs 59, 60, 65, 66, 70). More of this is taught in paragraphs 32-37, 70, 72, 74, and 75).

As per claim 25, Simon teaches generating at least one configuration packet including the security association information, wherein the sending step comprises sending the at least one configuration packet (paragraphs 54-55).

As per claim 26, Simon teaches sending, by a host processor, configuration information to the first security processor and the second security processor (paragraphs 32-37, 55, 56, 57).

As per claim 27, Simon teaches sending, by a host processor, security association configuration information to the first security processor and the second security processor (paragraphs 32-35, 37, 55, 56, 57).

As per claim 28, Simon teaches updating security association information for at least one outbound packet (paragraphs 58-60, 79-80)

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As per claim 38, Simon teaches a security processing system, comprising: a first security processor for processing a first packet flow (paragraph 30-35, 37, 46, 70), updating security association information in response to the first packet flow (paragraphs 40, 59) and sending the updated security association information to a second security processor (paragraphs 59, 60, 70); a second security processor for processing a second packet flow (abstract, paragraph 70); updating a security association information in response to the second packet flow (paragraphs 40, 59, 60, 70); and sending the updated security association to the first security processor (paragraphs 40, 59, 60, and 70, wherein sa information is exchanged to the corresponding routers); and at least one switch for routing the first packet flow and the second packet flow to the first security processor and the second security processor (paragraphs 43 and 62). (It is shown throughout the reference that the cryptographic nodes and edge routers may assume the function of another cryptographic node and edge router; SA information is constantly updated by the current nodes and routers, and the SA information may transferred between the edge routers/cryptographic nodes)

As per claim 39, Simon teaches at least one host processor connected to the at least one switch for terminating or initiating the first packet flow and the second packet flow (paragraph 43, Figure 3).

As per claim 42, Simon teaches a security processing system, comprising: at least one host processor for establishing a first packet flow to a first security processor and a second packet flow to a second security processor (paragraph 32); a first security processor for updating a first set of security association information associated with the

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first packet flow (paragraphs 32-34; also 79, 80); and sending the updated first set of security association information to a second security processor (paragraph 70); and a second security processor for updating a second set of security association information associated with the second packet flow (paragraphs 79 and 80, also paragraphs 32 and 33; also paragraphs 63-66 (it is shown throughout the reference that the cryptographic nodes and edge routers may assume the function of another cryptographic node and edge router; SA information is constantly updated by the current nodes and routers, and the SA information may transferred between the edge routers/cryptographic nodes repeatedly).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 21-24 and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon as applied above, and in view of Xiong et al. US Patent Application Publication 2003/0061507 (hereinafter Xiong).

As per claim 21, Simon does not explicitly teach wherein the security association information comprises at least one sequence number. However, this is taught by Xiong, such as in paragraph 23.

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At the time of the invention, it would have been obvious to one of ordinary skill in the art to include a sequence number with a security association. One of ordinary skill in the art would have been motivated to perform such an addition, as sequence numbers are commonly associated with security associations. This is taught in paragraph 23 of Xiong.. Also, by incorporating sequence numbers, the transmissions are more secure, as they prevent replay attacks (also found in paragraph 23).

As per claim 22, Xiong teaches wherein the security association information comprises at least one byte count (paragraph 23).

As per claim 23, Xiong teaches wherein the sending step further comprises repeatedly sending the security association information (paragraph 23, as sequence numbers are used to record each transmission). Further, Simon teaches this as well throughout the reference, such as in paragraphs 57, 60 and 66.

As per claim 24, Xiong teaches wherein the sending step further comprises repeatedly sending the security association information at intervals according to at least one sequence number (paragraph 23; also Simon paragraphs 57, 60, and 66).

As per claim 29, Simon teaches defining an interval at which to update the security association information in paragraphs 79-80. Xiong teaches defining a quantity to adjust a sequence number in paragraph 23. Xiong also teaches determining whether to send the security association information according to a comparison of a sequence number with the interval in paragraph 23. Although it does not teach a second processor, Simon teaches incorporating sending security associations to second security processors.

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As per claim 30, Xiong teaches adding the quantity to the sequence number before sending the security association information to the second security processor (paragraph 29 in combination with the Simon reference incorporating the second security processor).

As per claim 31, Xiong teaches updating security association information for at least one inbound packet (paragraphs 26-29 and Figure 6).

As per claim 32, Xiong teaches defining a quantity to adjust a sequence number (paragraph 23); defining a width of a replay window (paragraph 23); and determining whether to send the security association information to the second security processor according to a comparison of a sequence number with the width (paragraph 23 with the combination of Simon).

Claim 33 is rejected using the same basis of arguments used to reject claim 30 above.

As per claim 34, Xiong teaches sending replay window information to the second security processor (paragraph 23, in combination with the Simon reference incorporating the second security processor).

9. Claims 40, 41, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon as applied above, and in view of Rosenow et al. US Patent No. 5,022,076 (hereinafter Rosenow).

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As per claim 40, Simon teaches changing the routing of packet flow by either routing the first packet flow to the second security processor instead of the first security processor or routing the second packet flow to the first security processor instead of the second security processor (paragraphs 72, 73, 75, 76, and 77). However, Simon does not explicitly teach wherein the one host processor changes the routing of the packet flow. However, routing processes from one processor to another processor is well known in the art, as taught by Rosenow. Rosenow teaches throughout the reference the routing of processes from one processor to another processor, such as in the abstract and in col. 23 lines 59 to col. 24 line 11.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the Rosenow reference with the Simon reference. One of ordinary skill in the art would have been motivated to perform such an addition to provide more reliability by creating a fault tolerant system. This is taught throughout Rosenow, such as in the abstract and col. 4 lines 15-61.

As per claim 41, Rosenow teaches wherein the change in the routing is in response to a failure of the first packet flow through the first security processor or the second flow through the second security processor (abstract; col. 23 line 59 to col. 24 line 11). Also, this is taught in Simon's abstract, paragraph 79, and paragraph 95.

Claim 43 is rejected using the same basis of arguments used to reject claim 40 above.

Claim 44 is rejected using the same basis of arguments used to reject claim 40 above. (it routes to whatever processor is working).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Gee whose telephone number is (571) 272-6431. The examiner can normally be reached on M-F, 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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08/05/2007


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SUPERVISORY PATENT EXAMINER